FAST LOSSLESS ENCODER FOR DIGITIZED ANALOG DATA

ABSTRACT OF THE DISCLOSURE

[0051]   Lossless compression and the corresponding decompression of image and audio data are enabled using a combination of dynamic prediction and Golomb coding. First, data is converted from the *RGB* domain into the *YUV* domain. Next, a dynamic prediction algorithm is run to express pixel values as differential values rather than original bit values. Prediction coefficients are re-evaluated on the fly enabling additional compression because of more accurate predictors. An Adaptive Golomb Engine next performs an additional compression step, using an adaptive form of Golomb encoding in which mean values are variable across the data. The use of variable mean values reduces the deleterious effects found in conventional Golomb encoding in which localized regions of similar data are inefficiently coded if their bit values are uncommon in the data as a whole.